

# 2SJ120L, 2SJ120S

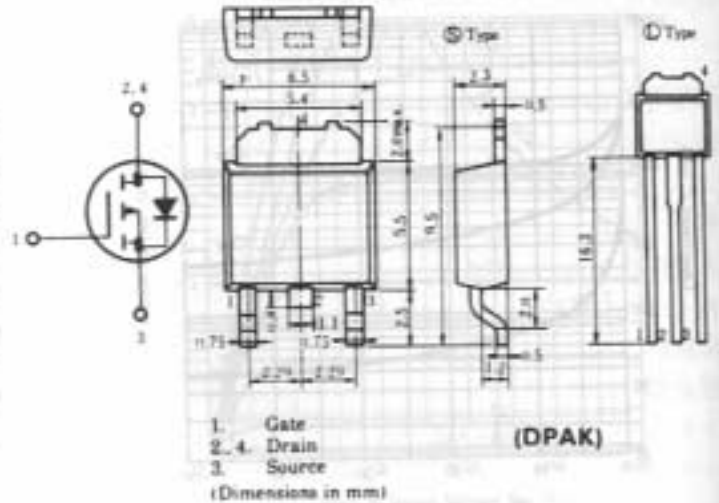
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## SILICON P-CHANNEL MOS FET

高速度電力スイッチング  
2SK416 とコンプリメンタリペア

### ■ 特長

- 小形パッケージ。
- オン抵抗が低い。
- スwitchングスピードが速い。
- 周波数特性が優れている。
- 安全動作領域 (ASO) が広い。
- スwitchングレギュレータ、DC-DC コンバータ、パルスメモリドライバなどに最適。

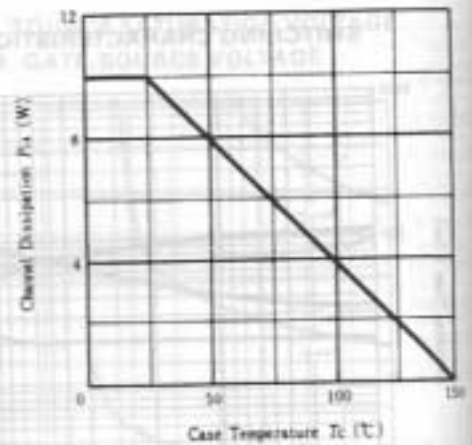


### ■ ABSOLUTE MAXIMUM RATINGS ( $T_c=25^\circ\text{C}$ )

Item	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	-40	V
Gate-Source Voltage	$V_{GS}$	$\pm 20$	V
Drain Current	$I_D$	-2	A
Drain Peak Current	$I_{D(peak)}$	-4	A
Body-Drain Diode Reverse Drain Current	$I_{DR}$	-2	A
Channel Dissipation	$P_{ch}$ *	10	W
Channel Temperature	$T_{ch}$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 - +150	$^\circ\text{C}$

\*Value at  $T_c=25^\circ\text{C}$

POWER VS. TEMPERATURE DERATING



### ■ ELECTRICAL CHARACTERISTICS ( $T_c=25^\circ\text{C}$ )

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Drain-Source Breakdown Voltage	$V_{DS(BR)}$	$I_D = -10\text{mA}$ , $V_{GS} = 0$	-40	-	-	V
Gate-Source Leak Current	$I_{GS}$	$V_{GS} = \pm 20\text{V}$ , $V_{DS} = 0$	-	-	$\pm 1$	$\mu\text{A}$
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS} = -35\text{V}$ , $V_{GS} = 0$	-	-	-100	$\mu\text{A}$
Gate-Source Cutoff Voltage	$V_{GS(off)}$	$I_D = -1\text{mA}$ , $V_{DS} = -10\text{V}$	-1.0	-	-4.0	V
Static Drain-Source On State Resistance	$R_{DS(on)}$	$I_D = -1\text{A}$ , $V_{GS} = -15\text{V}$ *	-	1.2	1.5	$\Omega$
Drain-Source Saturation Voltage	$V_{DS(sat)}$	$I_D = -1\text{A}$ , $V_{GS} = -15\text{V}$ *	-	-1.2	-1.5	V
Forward Transfer Admittance	$ y_{fs} $	$I_D = -1\text{A}$ , $V_{DS} = -10\text{V}$ *	0.1	0.25	-	S
Input Capacitance	$C_{iss}$	$V_{DS} = -10\text{V}$ , $V_{GS} = 0$ , $f = 1\text{MHz}$	-	150	-	pF
Output Capacitance	$C_{oss}$		-	150	-	pF
Reverse Transfer Capacitance	$C_{rss}$		-	25	-	pF
Turn-on Delay Time	$t_{on}$	$I_D = -1\text{A}$ , $V_{GS} = -15\text{V}$ , $R_L = 30\Omega$	-	9	-	ns
Rise Time	$t_r$		-	25	-	ns
Turn-off Delay Time	$t_{off}$		-	17	-	ns
Fall Time	$t_f$		-	23	-	ns
Body-Drain Diode Forward Voltage	$V_{DF}$	$I_D = -1\text{A}$ , $V_{GS} = 0$	-	-0.8	-	V
Body-Drain Diode Reverse Recovery Time	$t_{rr}$	$I_D = -1\text{A}$ , $V_{GS} = 0$ , $di_D/dt = 50\text{A}/\mu\text{s}$	-	70	-	ns

\*Pulse test